

ABSTRACT OF THE DISCLOSURE

Fine holes each having a diameter of scores of nanometers are formed in each of diamond thin films at an interval equal to the diameter of the fine hole, and metal electrodes each having a low resistivity are buried in the fine holes, and the distance between metal electrodes and the diamond thin films through which flows an electric current is set at an order of scores of nanometers so as to markedly lower the on-resistance. As a result, provided is a microswitch having a low on-resistance and utilizing the high reliability inherent in diamond.